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NEW TREATMENT OF HERNIA.

To the Editor of the Boston Medical and Surgical Journal.

SIR,—I propose to illustrate briefly a new method of treatment for the radical cure of reducible hernia, and to report some of the cases that have recently come under my care, and of which cures have been effected.

In the cure of hernia, physicians and surgeons in former times resorted to the use of various local applications, such as astringent washes, salves, cerates, cataplasms, rubefacients, blisters, &c., and a number of surgical operations, as the *punctum aurium*, royal stitch, cutting away the sac, cauterization, sewing up the sac by suture, incision as far as strangulation; also scarification, and the use of a great variety of trusses, bandages, &c. That a certain degree of irritation or inflammation is requisite for the cure of hernia, is well established from the results known to have followed some of the operations and plans of treatment we have just mentioned, and which is still further strengthened by cures known to have succeeded the operation of strangulation, and a case quoted from Richter by Mr. S. Cooper, in which the pad of a bandage excited in the region of the abdominal ring a considerable inflammation, which terminated in suppuration, and the hernia never re-appeared after the abscess healed. Surgeons, from the remotest period to the present day, have entertained the opinion that irritation or inflammation was essential to the cure of the disease, and this opinion is predicated upon the soundest philosophy, and true principles of anatomy and physiology, and amply sustained by results known to have attended injuries in other parts of the body. The most simple wound, as an incision, becomes more or less excited or irritated before it reunites, which is a process nature institutes for its restoration.

The tearing or stretching of the fibres of the parts in a recent hernia, in order to allow the escape of the viscera from the abdominal cavity, produces an irritation, and if a well-fitted truss is immediately resorted to, a perfect cure is sometimes effected. But, if the reduction and the retention be neglected, the irritation gradually exhausts itself, and consequently a cure cannot result without its re-establishment. From this view of the subject, then, we infer, *a priori*, that if the necessary degree of irritation or adhesive inflammation can be re-excited in the parts for the requisite length of time, radical cures will be effected. But the most important desideratum has been the attainment of some means compe-

tent to produce this excitement or irritation at the proper place, without either much pain or danger to the patient, and the lack of which has been the principal reason why the disease has been so long incurable. To effect this, the various modes of treatment we have already mentioned, were instituted; but their painful character, dangerous tendency, and often fatal termination, very properly led to their rejection and disuse. The employment of trusses alone has almost utterly failed, except under the most favorable circumstances, in very young subjects or recent cases.

In order to excite the necessary irritation in the parts immediately concerned, I inject, with a very delicate instrument, invented for the purpose, an exciting fluid. I subjoin the following cases to exemplify the operation, method of treatment, &c.

CASE I.—Mr. V., about 24 years of age, applied to me August 27, 1842, afflicted with direct or ventro-inguinal hernia of the left side, of six months' standing. It differed from the oblique variety in not taking the course of the inguinal canal, but protruding directly through the external abdominal ring, under the fascia of the cord, pushing the spermatic cord to the outer and upper part of the tumor. The patient was placed on his back, and the protruding parts returned into the abdominal cavity, the cord turned to one side, and the instrument carefully introduced through the common superficial integuments to the external abdominal ring and commencement of the inguinal canal, the truss was fitted and applied so that it effected complete retention of the protruding viscera, and the patient directed to pursue his ordinary avocation. In about thirty-six hours after the operation, which caused but little pain, there was some redness on the skin, attended with slight tenderness on pressure, and on introducing the finger into the ring, the presence of effused fluid or coagulable lymph, the medium of union between divided parts, was easily detected.

It was deemed necessary in this case (the local inflammation having entirely subsided) to repeat the operation five or six days after the first, in order to close the hernial opening sufficiently to complete the cure, which was accomplished in four weeks from the first operation, and the truss allowed to be laid aside.

CASE II.—Mr. S., 60 years of age, quite fleshy, placed himself under treatment October 20, 1842, for oblique inguinal hernia of four years' standing, produced by a severe injury. He had been able to keep the protruding viscera reduced by the use of a truss, which he had been obliged to wear constantly. On its removal while in the erect position, the bowels descended freely into the scrotum. Three fingers could be readily introduced through the external abdominal ring into the inguinal canal. The thickened hernial sac was adherent to the parietes of the opening. The same operation as in the first case, was performed at the upper and lower rings; the patient, as before, was allowed to follow his ordinary business. A complete closure of the sac, and diminution of the external abdominal ring to its usual size, took place during the first few weeks of the treatment, and he is now (three months) cured and allowed to throw aside his truss.

G. HEATON, M.D.

Boston, January, 1843.

ON THE LOCATIONS OF THE FUNCTIONS OF THE BRAIN.

(Translated for this Journal by JOHN F. MAY, M.D.—Concluded from page 368.)

Of the Relations which exist between the Forms of the Cranium and the Intellectual and Moral Faculties.

FAITHFULLY indicating the relation between the size of the face and brain, the form of the cranium gives us also the measure of the moral and intellectual capacity. Can we by means of it appreciate each particular faculty, or at least each group of faculties?

If we compare together the Negro and the European, we see that the temples and the superior parietal and frontal regions, uniformly narrow in the first and simultaneously developed in the second, preserve between each other the same relation in each race. Upon the principles of phrenology, the European should excel the Negro by the simultaneous energy of all his faculties; but the proportion of propensities to sentiments and intelligence should be the same in both; which is not the case: for the Hottentot, characterized for intellectual weakness, is distinguished for the force of selfish and egotistical propensities. Intemperate, covetous and revengeful, he possesses so little benevolence and justice, that for the slightest objects of show and utility he gives up to slavery and separation, friends, brothers and children. If we reject this predominance of low propensities on account of the incomplete civilization of these people, we answer that the Caucasian nations, even at the period of their greatest barbarism, have ever held sacred the domestic sentiments; so much so, that the sale of children by parents could only be considered by the greater part of them, as most unnatural and monstrous. I say the greater part, because we know that the Circassians and Georgians, members of the Caucasian family, still sell for small sums their marriageable daughters. But the exception does not destroy the general rule. We would also add that the contact of Negroes and Europeans never completely effaces the moral differences that separate them; and if this circumstance is attributed to the enslaving of the former, we would only remark, that in those countries where slavery still reigns, the white slave is rarely so debased as the Negro. We can then unhesitatingly declare, that the lower instincts are more powerful in the Ethiopian than in our race, although the proportion of the temples to the forehead and to the arch of the parietal bones may be the same in each.

If the doctrine of locations does not explain in detail the differences which distinguish these two varieties of the human race, the cause may be found in the small size of the brain in the one, and its great development in the other. The instincts which assist in individual preservation being elementary faculties, have a necessary exercise in the most simple brain, as we see in the animal kingdom. But the sentiments and intelligence being the moderating and judging powers over the instincts, produce more complex phenomena, and require an encephalic organization of a higher and more complete order.

If we pass to the American race, we see tribes, whose crania are formed in the same way, essentially differ in their moral physiognomy. The Columbian, mild, peaceable and indolent, is lulled into inactivity by

a warm climate. The Huron, incessantly stimulated by a more vigorous one, and constantly excited by organic desires, is cunning, thieving and warlike. Here the nature of the climate explains everything, the form of the cranium nothing.

In the Mongolian race, the posterior parietal region, compared with the forehead and temples, presents a greater proportion than in the other varieties; so that, in a phrenological point of view, circumspection, the desire of approbation, friendship, love of country, in a word the mild or social affections, should outweigh the individual propensities. Now, notwithstanding the relative depression of the temples, the Tartar is impelled to war rather by his rapacity than by love of glory, and quits his deserts with a fierce and eager pleasure in pursuit of conquest and plunder.

The Chinese are as moderate, sociable and peaceable, as their neighbors are wild and turbulent; yet between the heads of these two nations there is a remarkable identity of form.

The men of the Caucasian race are particularly distinguished for the strength of the social sentiments: as veneration, benevolence, love of approbation, the desire of governing, &c. Intelligent, industrious and communicative, they seem to possess in a high degree that power of association, which measures the material and moral strength of a people. Their individual propensities, sufficiently developed to give to all the faculties an energetic impulse, receive a moderating influence from intelligence and the sentiments which keep selfishness within proper bounds. If phrenology was true, it would necessarily follow that the proportion of the regions destined to the human faculties, properly speaking, to the other regions, should be greater than in the Negro; which is not the fact, for the parietal, temporal and frontal bones are uniformly increased in every part.

To counteract the weight of the preceding considerations, it will be, perhaps, alleged that the difference of education in each race, causes important modifications in intelligence, which we have not taken into consideration. If our comparison had only extended to individuals of the same variety, an objection of this nature would have some force, for the education of a single individual might depend upon the chance of circumstances—on the contrary, the general education of a people cannot depend upon fortuitous or accidental causes; it must be the result of their intellectual and moral organization. This we confess is modified by the influence of soil and climate, which will not, however, invalidate our conclusions, if we draw our comparisons from climates identical, or at least very analogous in their nature. Thus the immense country which extends from the Gulph of Mexico to Canada, unites most of the variations of climate of our temperate zone. Now compare the European with the Aborigines of North America. Both will present to you an epoch of barbarism, where industry is supplanted by the chase and war. But if you observe each of these races in its relations with social progress, you will find the Caucasian nations, yet savage, rapidly changing by simple contact with other nations more advanced in civilization; while you see the Americans striving for ages against a civilization,

which destroys without in the least affecting their social state. If the Indian persists in repelling our laws, our customs and our pacific industry, for the wild habits of his fathers; and if the white, under similar circumstances, has from all time yielded to the mild customs of his conquerors or neighbors, we must admit and acknowledge a difference in the native faculties of the two races. If this difference is not expressed by a large proportion of the forehead and the arch of the cranium in the white, and of the temples in the *red*, race, the doctrine of locations is false. Now these two regions, the one appropriated to the social sentiments, and the other to elementary instincts, bear the same proportion to each other in both races.

From what precedes, then, it results that the form of the cranium of the different human varieties has two real significations: the one has reference to certain conditions of equilibrium, which are variable according to the proportion between the face and the brain; the other expresses the degree of moral and intellectual perfection in indicating the volume of this latter organ. But comparative cerebroscopy does not justify the three great phrenological locations.

If we compare the subjects of the same race, we find a great number of exceptional facts, which it is necessary to appreciate before examining the system of Gall in its application to individuals of the white race. The intelligence and *moral* (Fr.) of the individual are so much the more perfect, in proportion as the brain preponderates over the face; such is the law which results from the comparison of the animal species, with the human races—the *law*, the truth of which Camper, Daubarton and Cuvier have acknowledged. But some persons, more logicians than observers, think that the *absolute* volume of the encephalon alone determines the intellectual power; that two individuals having the hemispheres equal, should manifest the same capacity, notwithstanding one surpasses the other in the volume of the jaws—for, say they, this volume has no connection with the functions of the encephalon. Reasonings *a priori*, give way before facts, and the direct connection of the faculties with not the *absolute* but *relative* mass of the hemispheres, is a *fact* in natural history, a fact sufficiently constant to establish a law.

This law, frankly expressed by the general characters of each type, still springs from a comparison of individuals of the same race: thus in the white variety, it is well known that men of superior capacity have most generally a cranium well developed and jaws but slightly projecting. And, on the contrary, the greater number of those of weak, obtuse and idiotic minds, are distinguished by the narrowness of the cerebral cavity and by the prominence of the face, proverbial signs of stupidity. The facial angle, which expresses this projection of the face, has in all times attracted the attention of sculptors and physiognomists. Such is the rule: let us see the exceptions.

If many eminent men, as Gall, Cuvier, Bacon, &c., are distinguished by a largely-developed brain, a broad forehead and a small and vertical face, others, like Mirabeau and Buffon, have the cranium narrow, the forehead receding and the jaws well pronounced. On the contrary, we often see individuals, remarkable by the development of the cranium, by the

harmonious and beautiful proportions of the face, nevertheless manifesting a deplorable incapacity. Their dull or inexpressive features, their eyes either dull or sparkling with the gaiety of nothingness, concur to disprove the nobleness of the forehead. Is it possible to attribute the inferiority of such men to the fault of education, if they have had the same advantages as others?

There exist, then, between individuals of the same race, intellectual differences, which are not explained either by education nor by either the absolute or relative size of the cerebral hemispheres. What is the cause of these differences? Intangible in its essence, it is expressed by its effects when it communicates powerful energy to a small brain. This vital condition, which we will call if you please the x physiological, does not belong exclusively to the nervous system; for we are forced to suppose its existence in the muscles, in the stomach, and in the other viscera, when energy, weakness, or the perversion of their functions, are not explained by alterations materially appreciable.

The action of the brain, like that of all our organs, is exercised under the influence of two conditions, one of which falls under the senses; this is the relative volume of the hemispheres: the other of which is concealed from our observation; and this is the physiological *unknown*. The first easily explains the intellectual inequality of the animal species and the human races; moreover, if we compare with each other subjects of the same variety, we often find a perfect accordance between the moral energy and the size of the brain; but often, also, this accordance does not exist; and in this case we can explain nothing without the intervention of the physiological *unknown*.

To resolve the difficulty of which we are speaking, Gall rejects the theory of the facial angle, and wishes us to take into consideration not only the total volume of the encephalon, but the configuration of its different parts. If we wish to appreciate the value of this opinion, we must examine the doctrine of location as specially applied to individuals of the Caucasian race.

Examination of the Doctrine of Locations, applied to Individuals of the same Variety.

Take at hazard, from the same race, one hundred adult individuals; compare the forms of the cranium with the moral habits, and decide on the question which occupies us. Whatever may be your conclusion, whether affirmative, negative, or neutral, your adversary can always reply to you—"Education and circumstances." Education and circumstances fashion and mould the faculties of the mass; but certain men receive from nature an exceptional organization, which in spite of all external influence governs them despotically, whether it elevates them to the summit of science and virtue, or whether it condemns them to vice and ignorance. Among the busts of the collection of Gall, some represent subjects of this last kind, celebrated in history or in the judicial records; others belong to individuals who, doomed to obscurity, do not offer that transcendent character which supposes unconquerable propensities; the latter would serve us, undoubtedly, if we knew the details of their edu-

cation and private life, which may modify a character but slightly marked. But as these details are wanting, we will only examine the busts of famous or celebrated men, whose extraordinary (*hors ligne*) actions cannot be explained either by education or by circumstances. If we prove that the examples given by Gall himself, as confirmative, are far from conclusive, or entirely negative, we shall have shown that the doctrine of locations, applied to individuals of our race, is radically false.

Each bust bears an inscription, according to which the faculties, the actions and the forms of the head have constantly the relations desired by phrenology. Is this inscription the truth? It is this we are now going to test, by appreciating in each model the size of the cranium, its relations with the face, and the respective extent of its different regions. As the casts have been moulded with the soft parts, we shall deduct the thickness of the latter from the length of each diameter. Thus we shall reduce 5 millim.; the antero-posterior, the bi-parietal, the bi-frontal and the bi-temporal, from 20 to 25, according to the subject. These reductions it may well be imagined are only approximative in each bust; for how can we, with accuracy, measure on plaster the thickness of the skin, fat and temporal muscle? However, we shall appreciate the facts in too liberal a manner for a slight inaccuracy to invalidate our conclusions.

1. We shall first call attention to four criminals executed for homicide. The first, the assassin of his father, is characterized as follows: insubordinate, stupid, proud and opinionated; the form of his head expresses, according to Gall, all these faults, and, besides, the propensity to murder. The second, a highway robber, presents, it is said, in the highest degree, the conformation belonging to pugnacity, destructiveness, cunning and firmness, and is moreover distinguished by the depression of the organs of veneration and benevolence. The third, the murderer of his mother, is remarkable for the relative development of the squamous region, that is, of the organs of murder and cunning. The fourth, the assassin of his benefactor, shows on his cranium the irrevocable signs of self-love, haughtiness, obstinacy and murder.

These four casts have, as common characteristics: enormous size and prominence of the face; the cheek bones prominent; slight elevation of the cranium, and which is less by about 15 millim. than the average length; the forehead receding backwards. The facial angle is from 75 to 80 degrees, and is not equal to the average in our race. These indications of stupidity are carried to the greatest degree in the one who was the assassin of his mother.

Passing now to the appreciation of the different regions of the cranium, we find, in the first, after deducting the thickness of the soft parts—the antero-posterior diameter is 185 millim.; bi-temporal, 130; bi-parietal, 130; bi-frontal, 120; vertical, 125. In the second—the antero-posterior diameter, 185; bi-temporal, 130; bi-parietal, 135; bi-frontal, 125; vertical, 127. In the third—the antero-posterior diameter, 184; bi-temporal, 130; bi-parietal, 140; bi-frontal, 125; vertical, 126. In the fourth—the antero-posterior diameter, 195; bi-temporal, 138; bi-parietal, 140; bi-frontal, 115; vertical, 130.

Since in the two first, the breadth of the parietal bones, at their pos-

terior and superior part, is a centimetre below the average, we are not able to see in their heads the phrenological expression of pride and of firmness. Otherwise we readily confess that these four examples are favorable to the system, so far as that the bi-temporal diameter is equal or greater than the average, whilst the other diameters are less than it. If the majority of robbers and assassins presented a similar conformation, it would be possible to show, with some success, the phrenological functions of the temporal regions of the brain. The demonstration would nevertheless be weakened by this circumstance, viz., that in the four above-mentioned subjects, we behold a cranium, on the whole, narrowed and with projecting jaws; which indicates stupidity. This produces very often the preponderance of the egotistical propensities, as is proved by the manners of savages, and which we admit every day by saying that the instruction of the mass is the surest guaranty of their morality. But in our four criminals, is the relative violence of the bad propensities owing to the feeble size of the brain, or rather to the special conformation of the temples? If this objection receives no reply (and we do not see that one is possible), we have the right to consider as valueless these examples, which are apparently of a confirmative character.

Besides, in the above examples, the excess in the proportion of the face bears principally on its breadth, and the separation of the branches of the inferior jaw is equal or greater than the average of our race; from whence it follows, that as the bi-temporal diameter cannot be below the average, the contraction of the cranium, caused by the smallness of the hemispheres, affects all the regions except the squamous; from whence the predominance of the organs of murder, of cunning, &c., over all the other parts of the brain.

If we reflect on the necessity of a constant harmony between the separation of the glenoid fossæ and the breadth of the jaw, we can conceive that in our race the great proportion of the temples should exist in all persons with a broad face and small brain, whatever may be the habits of the individual. Thus we have met with it, 1st, in idiots without a bad passion; 2d, in adults whose intelligence was below mediocrity, but who were otherwise very amiable and sociable; 3d, in fine we have never seen this conformation more decided than in four children, of from 12 to 14 years of age, whose dispositions were perfectly well known to us. They had the cheek bones projecting, the facial angle acute, the inferior jaw broad between the two condyles, the cranium low, the forehead receding, the arch of the cranium contracted, the temples proportionally very broad. These characters were so striking, that many persons asked, on examining these subjects, if they were mischievous or of thieving disposition. Now they were amiable even to a fault, and allowed themselves to be beaten by their malicious comrades, without resorting at all to their physical strength, which seemed to be above that of their age. Without being imbecile, they were but slightly intelligent. Their condition being but little elevated, and their minds without culture, removed every objection relative to education and circumstances. It requires but little attention to this subject, to see every day around us individuals analogous in all respects, and their great number will oblige us to conclude

that the above-mentioned conformation is not peculiar to brawlers, to robbers and to assassins.

The following observations will prove to us that the greater part of the heads of criminals, on which Gall has desired to found his system, are not to be distinguished from others by the development of the temples.

1. We find in the collection a homicide through the instigation of one of his friends, whose head, which is presented to us as favorable to the doctrine, offers the following conformation:—Facial angle of from 83 to 85 degrees. Antero-posterior diameter, 165 millimetres; bi-temporal, 135; bi-parietal, 145; bi-frontal, 132; vertical, 140. The whole of the cranium presents more than ordinary dimensions; if the temples have more than the average breadth, it is the same with the arch of the parietal bones and of the frontal region, the prominence and elevation of which are very remarkable. Now for this case to support the system, it is necessary that the organs of murder should be proportionally much greater, or that of the organs of the higher faculties much less.

2. Highway murderer, cunning, circumspect, firm and fruitful in expedients, sanguinary and courageous.—Antero-posterior diameter, 185 millimetres; bi-temporal, 145; bi-frontal, 130; bi-parietal, 165; vertical, 142. The breadth of the parietal bones, at their superior and posterior part, indicates the great development of the convolutions assigned to circumspection and firmness: but the size of the temples, although considerable, is small compared with the other parts. It is then through an inaccurate appreciation, that on this cast the organs of destruction, murder and cunning have been designed as predominant. The size of the cranium indicates a most complete cerebral organization, and explains to us the spirit of resource which this man exhibited in the course of his perilous career.

3. In one culpable of murder followed by robbery, we find—facial angle, from 80 to 82 degrees. Antero-posterior diameter, 185 millim.; bi-temporal, 130; bi-parietal, 145; bi-frontal, 125; vertical, 140. The bi-temporal diameter in this case remains equal to the average, whilst the majority of the others surpass it: it is therefore refractory to phrenological laws; circumspection, the social sentiments and intelligence, should have, in the present instance, overbalanced the bad propensities.

4. Assassin of his benefactress through the instigation of his mother, remarkable, it is said, for the excess of the organs of covetousness, cunning and destruction—Facial angle, 80 degrees. Antero-posterior diameter, 195 millim.; bi-temporal, 130; bi-parietal, 145; bi-frontal, 135; vertical, 142. As the forehead is not only very broad, but also elevated and full; as the arch of the parietal bones is of the best development; and as, on the contrary, the breadth of the temples does not surpass the average, we may class this case with the preceding and the following.

5. Murderer of one of his parents, presenting in the highest degree the organs of murder and cunning. Head voluminous, well proportioned, forehead broad, full and elevated.—Facial angle, 85 degrees. Antero-posterior diameter, 187 millim.; bi-temporal, 140; bi-parietal, 145; bi-frontal, 140; vertical, 142. From these dimensions it follows that the re-

gion of the temples, although greater than the average, is narrow in comparison with the frontal.

6. The murderer of his daughter whom he loved.—Antero-posterior diameter, 195 millim.; bi-temporal, 125; bi-parietal, 130; bi-frontal, 128; vertical, 135. This head is remarkable for the narrowness of the face and the small development of the cranium. Of all the transverse diameters, the frontal only surpasses the average; the bi-temporal and the bi-parietal are less than it by some millimetres; and as, on the other hand, the frontal is projecting and elevated, intelligence should in this man have checked the course of the sanguinary instinct.

7. An old woman who, being an accomplice with her son, assassinated her benefactress.—Antero-posterior diameter, 175 millim.; bi-temporal, 122; bi-parietal, 123; bi-frontal, 125; vertical, 130. The cranium, although not voluminous, preserves just proportions with the face. We ask why Gall finds in this head the expression of a transcendent firmness and pride, when all the arch is uniformly contracted; why the organs of cunning and murder, when the breadth of the temples is much below the average.

8. The murderer of a woman whose jewels he stole.—Antero-posterior diameter, 205 millim.; bi-temporal, 130; bi-parietal, 152; bi-frontal, 132; vertical, 142. Upon the principles of phrenology, intelligence and the sentiments should have overbalanced in this man the bad passions; for the forehead and the arch present a singular elevation and breadth, while the breadth of the forehead is equal to the average.

In presence of so many negative facts, we can only cite the two following cases as favorable to the system.

9. The murderer of his brother.—Facial angle, 80 to 82 degrees; forehead sufficiently broad, high and full. Antero-posterior diameter, 180 millim.; bi-temporal, 130; bi-frontal, 130; bi-parietal, 115; vertical, 130. Of all the transverse diameters, that of the temples is the only one equal to the average.

10. A man convicted of murder, becomes repentant and denounces his accomplices; Gall remarks on this head the great development of the organs of murder, cunning, vanity, and of comparative sagacity.—Antero-posterior diameter, 195 millim.; bi-temporal, 138; bi-parietal, 133; bi-frontal, 125; vertical, 130. Arch of the parietals narrow in its whole extent; facial angle, ordinary. We do not see clearly in this case the conformation proper to vanity and comparative sagacity: but we observe more directly that of murder and cunning, because the breadth of the temples is above the average by eight millimetres, whilst that of the parietal bones only surpasses it by three, and the bi-temporal diameter does not exceed it.

The three following are as opposite as possible to the system.

11. An assassin, without motive, of children unknown to him.—Antero-posterior diameter, 195 millim.; bi-temporal, 130; bi-parietal, 145; bi-frontal, 125; vertical, 142. This last diameter is longer behind than anywhere else; from whence it follows that the organs of circumspection, firmness and approbation, are sensibly increased above the others; but as the faculties which they bring into action are opposed to the bad pas-

sions, whose organs are but feebly developed, we may consider this fact as positive and decisive: for this is the case of a murderer who kills for the mere pleasure of killing.

12. A woman in the habit of murdering her lovers for the purpose of robbing them. Forehead full, sufficiently broad, but without elevation. —Antero-posterior diameter, 185 millim.; bi-temporal, 118; bi-parietal, 130; bi-frontal, 125; vertical, 130. Is it possible to find a case more opposed to the phrenological system, and can we conceive that Gall should have presented it as confirming it?

We have likewise met in the same collection with the heads of poisoners, the conformation of which indicated, according to the inscription, the absence of courage and the development of cunning and murder. But can we conceive that a cranium very full above the zygomatic apophysis, should suddenly contract above the mastoid protuberances where pugnacity is placed? This sudden change of form is not found on the heads of poisoners. It would be necessary, in order to make them more subservient to the doctrine, to attribute their timidity to an excess of circumspection, and not to a want of courage; which the more recent followers have been ready to do, although with another view.

It is without doubt perceived, that instead of attacking, one by one, admitted locations, we have particularly directed our attack against that part of the system which finds the fewest unbelievers—that is, the three great phrenological divisions. It is sufficient to reflect on the above observations, to be convinced that the refutation which results from them is not only applicable to the region of the temples, but also to the arch of the parietal bones and the frontal region; in fact, we have demonstrated, on the majority of the heads of murderers not presenting the conformation indicated by Gall, the organs of the higher faculties so well developed that they should have governed, or at least balanced, the antagonistic force of the instincts. We shall, however, take up the examination of some casts intended to prove the phrenological functions of the superior parietal and frontal regions.

1. Disinterested philanthropist, remarkable for the development of the organs of *educability*, *pride*, *kindness*, *firmness* and *cunning*—Facial angle, 80 degrees. Antero-posterior diameter, 195 millim.; bi-temporal, 138; bi-parietal, 142; bi-frontal, 118; vertical, 137. It is undoubtedly to the breadth of the arch of the parietals behind, that the special indication of *firmness* is owing. Kindness is not expressed on this cranium, for the forehead, but slightly salient and moderately elevated, is contracted at all points. But we see there, in return, the pretended conformation of great criminals, for the bi-temporal diameter is eight millim. greater than the average, while the bi-parietal scarcely exceeds it, and the frontal is less than it by seven millim. These anatomical circumstances authorize us to ask, why the person, of whose head we are speaking, manifested virtues the most contrary to selfish propensities. To anticipate this question, phrenology has sought in the temporal region some faculty whose power was not incompatible with devotedness; and *robbery* and *murder* not answering its object, it has had recourse to *cunning*, and has marked its organ as one of the most decided of the head we are con-

sidering. After having explained, by the development of a single organ, the excess of volume of an entire region, it has refrained from indicating whether the philanthropist had shown himself crafty or not. Here Gall relies, without doubt, on the sagacity of future cranioscopists, who would readily suppose some little *cunning* in a philanthropist, and especially in a disinterested philanthropist; upon this last point Gall does not deceive himself. But he errs in believing to be able to seize upon the expression of *cunning* in this cranium, without seeing in the same degree that of robbery and murder; for the parieto-temporal region being uniformly developed throughout its whole extent, if one of the three organs predominates, the two others predominate also.

2. The anterior and superior portion of the cranium of Joseph II. is presented to us as a model of benevolence and of justice; but since the frontal bone, narrow and but moderately full, does not attain the ordinary height, we are authorized in supposing that the phrenologist has drawn his indication rather from the well-known character of Joseph II. than after the shape of his head.

3. An author of unpublished operas, well known for his mysticism.—Head nearly round, forehead narrow, projecting but little, and but slightly elevated, does not present the conformation belonging to religious men. Antero-posterior diameter, 180 millim.; bi-temporal, 124; bi-parietal, 130; bi-frontal, 115; vertical, 135.

The phrenologist succeeds much better in presenting the following example. Facial angle, 82 degrees. Antero-posterior diameter, 190 millim.; bi-temporal, 125; bi-parietal, 130; bi-frontal, 108; vertical, 140.

All the transverse diameters having but little length, we cannot understand why the organs of firmness and circumspection are set down as being very well marked on this head. We nevertheless admit that the frontal, although contracted (narrowed), is strikingly full (projecting), and presents the vertical elevation, which, according to phrenology, belongs to *religious* men.

4. Another mystic, characterized as follows: vain, proud, credulous, visionary, and of feeble intellect. Facial angle, 78 degrees. Antero-posterior diameter, 195 millim.; bi-temporal, 130; bi-parietal, 133; bi-frontal, 118; vertical, 130.

Can it be believed that Gall should have compared this head with the preceding, from which it differs on all points; that he should have seen on it the marks of mysticism and pride, notwithstanding the narrowness of the parietal arch? Can we conceive that he should not have remarked on it the indications of destructiveness, of rapacity, and of cunning, when the bi-temporal diameter equals the average, whilst all the other diameters are less than it? The head of this visionary in all respects resembles those of the four first murderers of whom we have spoken; that is, it is distinguished by the projection of the face, and by the predominance of the temples over all the other regions, by the feeble proportion of the encephalon which produces the narrowness of the cranium, and by the breadth of the lower jaw. On account of this last circumstance, the bi-temporal diameter cannot be below the average, and the narrowness of the cerebral cavity, the consequence of the smallness

of the brain, affects only the forehead, the arch, and height of the cranium; whence the pretended predominance of the organs of cunning, murder and rapacity. With this mystic, as with the murderers who in the cranium resemble him, the form of the head indicates stupidity; but the latter is evinced in the first by visionary dreams and by credulity; in the last, by the brutal force of the selfish propensities. Thus do we see opposite traits in heads of the same shape, inasmuch as the relations of the encephalon to the jaws are the same in the *assassin* and in the mystic.

We find accumulated in the collection a large number of busts moulded from musicians and mathematicians, and on which the particular projection of the organs, corresponding to the governing faculties of each individual, is not detected; we firmly believe that it is impossible to detect it. In fact, the divisions of too especial a nature have at the present day but few partizans; and all that it was important we should examine, is the great division of the cerebral surface into three groups of organs, of which the one corresponds to the sentiments, and the others to the propensities and to intelligence. We think we have done this with sufficient exactitude to boldly conclude that the doctrine of locations, applied to our race in particular, is absolutely false. The most erroneous systems are supported by some incontestible facts, the loose interpretation of which often leads to absurdity. What, then, are the positive truths which have furnished the basis of the system of Gall? Behold them: 1st. In the mammalia and the varieties of our species, the cerebral portions of the frontal bone and of the parietal arch increase in the same proportion as the intellectual and moral perfection. 2d. In our race, the most perfect men are distinguished by the development of the forehead and of the arch.

Upon these general principles does the conclusion of the truth of the three great phrenological divisions rest; a conclusion most loose—for in the animal kingdom and in the human races, the development of the forehead and of the arch measures the relative size of the face and brain, the faithful expression of the moral perfection. It is, then, in consequence of a false deduction that the phrenologist has united as favorable to his doctrine, the busts of Goethe, of Bacon, of Socrates, and of Henry IV. These casts, remarkable for the harmonious and simultaneous development of all parts of the cranium, by the just proportion of the jaws, by the size of the forehead and the arch, do not evince, as has been supposed, the moral peculiarity of the individuals they represent. Goethe joined to an ardent and sombre imagination, an observing and meditative mind; Bacon was distinguished by his philosophical genius, his pride, his subserviency to royalty, his selfishness and his vices; Socrates, a bold innovator, full of self-denial, gifted with a dogmatic eloquence, cutting and profound, displayed in the bosom of paganism all the force of that moral and religious instruction which prepared the way to Christianity. Henry IV. united energetic instincts, courage, cunning, acquisitiveness, to an elevated intelligence, to sentiments of the first order, such as ambition and firmness. The first has made a great poet. The second, governed by his intellect, is acknowledged as the legislator of general science. He has been proclaimed the man of *genius*. The third, carried away by

the sentiments of a generous and sympathizing soul, is acknowledged as the organizer of morals; posterity hails him as a *genius* and as a *martyr*. The fourth directed all his efforts with the view of personal interest, and his epoch made him *king*. These four extraordinary minds took very different routes. If the birth of the last influenced the direction of his mind, it is not so with the other three, who without doubt followed the impulse of their native faculties. To what is owing this preponderance of intellect in Bacon, and of the sentiments in Socrates? We do not know; but it is certain that it has no appreciable material expression.

GENERAL CONCLUSIONS.

From the facts and remarks contained in this memoir, the following conclusions may be drawn.

1. In analogous species, the form of the cranium indicating the respective development of the encephalon and of the face, measures the intellectual and moral perfection, and consequently the ferocity which is in an inverse ratio to this perfection; this results from a comparison of the tiger and spaniel. But among certain dissimilar species, there are differences in the form of the cranium and brain, although the habits are the same, inasmuch as there are diversities in the mechanism either general or partial and reciprocally; which is seen in comparing the wolf and the weasel, the beaver and the cat; from whence it follows that the anatomy of the mammalia is opposed to the doctrine of locations.

2. The comparative forms of the cranium in the human races, indicating the respective volume of the encephalon and of the face, measure the intellect on the whole. When two varieties of our species are distinguished, the one by the elevation of the higher faculties and sentiments, and the other by the preponderance of the lower propensities, we find the cranium uniformly increased in the first, and invariably contracted in the second; but the parietal arch, the frontal and zygomatic-mastoid regions, preserve the same proportions between each other in both; from whence it follows that the anatomy of the human race is opposed to the doctrine of locations.

3. The greater part of the crania of murderers, robbers and prisoners united in the collection of Gall, have not a different shape from the average configuration of the crania of the white race; which exact measurements have demonstrated. A very small number present the form desired by the phrenologists; but as we have also observed this same form in the most gentle subjects, having a large face and small brain, we are forced to conclude that it is not peculiar to robbers, murderers, &c. &c. From whence it follows that the comparative craniology of individuals of the same race, is unfavorable to the doctrine of locations.

It only remains for us to compare our three means of refutation, in order to appreciate their respective value. Gall and his successors, seeing how much strength their system could derive from the sanction of analogy, have neglected nothing, by which they might interpret to their favor the form of the cranium in certain of the mammalia. Thus when the particular form of the head of a murderer does not produce entire conviction in the mind of the sceptic, calling to his assistance comparative anatomy, he insists on the proportions so remarkable between carnivorous and herbivorous animals. But having demonstrated that the cerebroscopy of the mammalia repels the system, a heavy blow is given to the cerebroscopy of man; for it isolates it. We see among men of the same race intellectual differences so feeble that it is nearly always possible to attribute them to external influences; which the phrenologists do so much the more willingly, as the resemblance of heads of the same type rarely permits them to seize the speciality of form which explains the moral peculiarity. But on examining each human variety in its generality, we find, on the one hand, native faculties designed for great enterprises in morals; on the other, an average conformation of the head characterized as a distinct type: so that if there exist among races moral and anatomical differences, the one and the other are equally well marked and easy to seize: now all these differences exist, but they do not correspond in such a way as to justify the system of locations.

It is a great deal to have abstracted from phrenological laws all the animal kingdom, and half of the human species; but in order to complete our task, it was necessary to examine the application of the system to the white race. Here the choice of facts was difficult; for in spite of all our care, a crowd of objections could be raised relative to education, to circumstances, &c. Therefore, we have examined the collection of Gall himself, and have turned it against its author. To invalidate our conclusions, our adversaries must reject this collection as incompetent. Will they do so? And if they do, how will they replace the labors of their master? Each of our three methods, isolated, possesses great value; united, they must, we think, produce conviction.

OPERATIONS PERFORMED AT THE MASS. GENERAL HOSPITAL.

[Reported for the Boston Medical and Surgical Journal.]

JANUARY 21st. *Amputation of Scirrhus Breast*, by Dr. HAYWARD.—Patient is 61 years of age, has borne two children; at first labor had abscess of right mamma, but never any trouble with left, till two years ago, when she had some pain in breast, and first observed that the nip-

ple was retracted. During the last year retraction of integuments has increased; has had severe lancinating pain in mamma, extending frequently down left arm, and some pain in lower extremities. General health pretty good; no cough; has kept about till prevented by pain in lower extremities. Reports that within the last two years has had "salt rheum" on both arms; cannot tell whether this appeared before the pain was observed in left breast or not. Now has a small, smooth spot, of a dull red color, on the front of left wrist, with somewhat scaly edges; this she reports to be the remains of the eruption, and that the rest resembled it, except that it was of a brighter color. On examination, find a hard tumor occupying a considerable portion of the gland below the nipple; integuments not broken, nipple retracted, and also a portion of skin in a line towards axilla. Axillary glands not indurated.

Two elliptical incisions, each seven inches long, were made, including between them a portion of skin three inches wide in centre, which comprised the nipple and the skin over the indurated portion of the gland. The dissection was then continued down to the pectoral muscle, and the whole of the disease removed. Two scirrhous tubercles, of the size of small peas, were found in the skin at the upper edge of the wound, and removed. As the hemorrhage at the time of the operation was slight, only one artery could be secured, but the wound being left open, and only cold water dressing applied, in the course of the afternoon a slight bleeding occurred, and five more arteries were tied, including the external mammary. As no oozing then took place, the edges of the wound were brought together by interrupted sutures. On cutting into the breast, a white tubercle, two inches wide by half an inch deep, was discovered; it was entirely distinct from the rest of the gland, and of an almost cartilaginous consistency. A small portion of similar quality was also found at the base of the nipple. No other tubercles were found but the cellular substance under the retracted integuments, towards the axilla, was indurated.

Division of Tendo-Achillis, by Dr. TOWNSEND.—This was a case of modified varus (not congenital), the patient walking on the outer edge of the foot, but not touching the malleolus externus to the ground. The tendon was divided by the subcutaneous incision.

BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON, FEBRUARY 1, 1843.

A LARGE portion of the Journal to-day is devoted to the conclusion of an important article, the division of which, by its continuance in another volume, it was desirable to avoid. We should hardly have felt justified, however, in again claiming the indulgence of a number of correspondents, whose favors have been several weeks delayed, were it not that the enlargement of the Journal, which was alluded to last week, will hereafter, it is presumed, prevent its repetition. We have barely room now to state, that in commencing the 28th volume, next week, a sheet one third larger than the present will be issued, four pages of which will be used as a cover; by which means the newspaper form and postage of the work will still be retained, additional room for advertisements will be secured, and five pages more of reading matter (including the present advertising page) will be given weekly. The price will remain the same.

Physiological and Medicinal Properties of Bromine.—A pamphlet on *Bromine and its compounds*, through the attentions of Dr. Cogswell, of Halifax, was some time since received, but we have not till now had an opportunity even to give it a slight examination. It is the Harveian Prize Essay for 1842, republished from the *Edinburgh Medical and Surgical Journal*, No. 152, and cannot, on account of its great length, be inserted in this Journal. The author is R. M. Glover, M.D., of Newcastle-on-Tyne. A series of experiments, of a novel kind, were instituted, which give peculiar character to the essay. The author says, "On the whole, there can be but little hesitation in placing bromine intermediate in physiological properties, between chlorine and iodine; but more nearly related to the former than to the latter body."

Medical Lectures in Boston.—A neat and accurate catalogue of the gentlemen now attending medical lectures in Boston, was published last week. There are 10 from New Hampshire, 83 from Massachusetts, 1 from New York, 4 from Connecticut, 6 from Maine, 1 from Ohio, 4 from Rhode Island, 1 from Vermont, 2 from Lower Canada, 1 from New Jersey, and 1 from Jamaica. The medical institution is in a flourishing condition, and constantly increasing its facilities.

Births and Deaths in Philadelphia.—In 1842, there were 8274 births in that city. Of that number, 4310 were males, and 3964 were females. The deaths were 5833—the males being 3172—the females 2661—making an excess of births over the deaths, of 2441.

Number of deaths in Boston for the week ending Jan. 26, 31.—Males, 16; Females, 15. Stillborn, 2. Of consumption, 6—infantile, 2—dropsy on the brain, 1—inflammation of the lungs, 1—erysipelas, 4—fever, 1—paralytic, 1—disease of the brain, 1—scarlet fever, 1—inflammation of the bowels, 1—croup, 3—smallpox, 1—lung fever, 1—palsy, 1—asthma, 1—measles, 1—intemperance, 1—colic, 1—throat distemper, 1—fits, 1—disease of the brain, 1.

UNIVERSITY OF NEW YORK.—MEDICAL DEPARTMENT.

SPRING COURSE OF LECTURES.

The Spring Course of Lectures in this Institution will commence on Monday, March 26th, and continue until early in June.

VALENTINE MOTT,	Surgery.
GRANVILLE SHARP PATTISON,	Anatomy.
JOHN REVERE,	Practice of Medicine.
MARTIN PAINE,	Institutes and Materia Medica.
GUNNING S. BEDFORD,	Midwifery and Diseases of Women and Children.
JOHN WILLIAM DRAPER,	Chemistry.

The dissecting room will be open as long as the weather will permit, and the usual facilities afforded for daily attendance at the New York Hospital, and at the Eye and Ear Infirmary.

Fee for the whole course of Lectures, \$50. Fee for the dissecting room, an attendance on which is optional, \$5.

The Faculty will receive an attendance on two complete summer courses as an equivalent for one winter course.

Respectable board can be obtained at from \$2.50 to \$3.00 per week. By order of the Faculty,
Jan. 25—eptL JOHN WM. DRAPER, Secretary.

VERMONT MEDICAL COLLEGE AT WOODSTOCK.

The annual course of Lectures will be commenced on the first Thursday of March next, and will be continued fourteen weeks.

FACULTY.

HENRY H. ORILDS, M.D., Professor of the Theory and Practice of Medicine and Obstetrics.
HON. JACOB COLLAMER, A.M., Professor of Medical Jurisprudence.
BENJAMIN B. PALMER, M.D., Professor of General, Special and Surgical Anatomy, and Physiology.
ALONZO CLARK, M.D., Professor of General and Special Pathology and Materia Medica.
EDWARD M. MOORE, M.D., Professor of the Principles and Practice of Surgery.
CHESTER DEWEY, M.D., Professor of Chemistry, Botany and Natural Philosophy.
DANIEL CAMPBELL, M.D., Demonstrator of Anatomy.

Fees—for the course, \$50. Matriculation, \$3. Graduation, \$18.

Board, including room, fuel, &c., may be obtained in good families from \$1.50 to \$2.00 a week.

By order of the Faculty, B. R. PALMER, Dean.

Woodstock, January 1st, 1843.

Jan. 25—eptM1

CASTLETON MEDICAL COLLEGE.

SPRING SESSION, 1843.

The Lectures will commence on the first Thursday of March, and continue fourteen weeks.

Anatomy and Operative Surgery, by JAMES MCCLINTOCK, M.D.
Materia Medica and Obstetrics, by JOSEPH PERKINS, M.D.
Theory and Practice of Medicine and Principles of Surgery, by DAVID M. REESE, M.D.
Physiology, General Pathology and Operative Obstetrics, by CHAUNCEY L. MITCHELL, M.D.
Chemistry, Pharmacy and Natural History, by EZRA S. CARR, M.D.
Ophthalmic Anatomy and Surgery, by ALFRED C. POST, M.D.
Medical Jurisprudence, by J. STANLEY GRIMES, Esq.
Pathological Anatomy, by ALBERT G. UPHAM, M.D.
Demonstrator of Anatomy, ALVIN C. WELCH, M.D.

Fees for the course, \$50. For those who have attended two courses at other medical colleges, \$10. Matriculating fee, \$5. Graduating fee, \$16.

Boarding per week, \$1.50 to \$2.00.

Castleton, Vt., Dec. 1842.

Jan. 11—tM1

E. S. CARR, Registrar.

MASSACHUSETTS MEDICAL SOCIETY.—COUNSELLORS' MEETING.

A STATED meeting of the Counsellors of the Massachusetts Medical Society will be held at the Society's room, Masonic Temple, Tremont street, on Wednesday, February 1st, at 11 o'clock, A. M.
Jan. 18—2t SAMUEL MORRILL, Rec. Sec'y.

The subscriber having completed a convenient building for the accommodation of students, with an office, well-furnished library, and dissecting room attached, is prepared to receive pupils, and to afford every necessary facility. Such other practical advantages as are to be found in the private medical schools of this city, will also be given.
Jan. 25—eptm WINSLOW LEWIS, JR.

THE BOSTON MEDICAL AND SURGICAL JOURNAL is published every Wednesday by D. CLAPP, JR., at 184 Washington St., corner of Franklin St., to whom all communications must be addressed, post paid. It is also published in Monthly Parts, with a printed cover. There are two volumes each year. J. V. C. SMITH, M.D., Editor. Price \$3.00 a year in advance, \$3.50 after three months, or \$4.00 if not paid within the year. Two copies to the same address, for \$5.00 a year, in advance. Orders from a distance must be accompanied by payment in advance or satisfactory reference. Postage the same as for a newspaper.

